

Appendix A - Summer School Agenda

Sunday, June 24

18:00 - 21:00 Welcome reception with finger food

Monday, June 25

07:00 - 08:30 Breakfast

08:30 - 08:45 Opening – Logistics by Simon Wong, ICHEC

08:45 - 10:00 Introduction of participants

10:00 - 10:30 HPC Challenges and Opportunities: PRACE and XSEDE by Simon Wong, Irish Centre for High-End Computing and Scott Lathrop, Shodor Education Foundation Inc.

10:30 - 11:00 Break

11:00 - 12:00 Keynote: "The exascale, why and how" by David Keyes, KAUST/Columbia University

12:00 - 13:30 Lunch

13:30 - 14:30 "Introduction to Accelerators" by Rob Farber, ICHEC and BlackDog Endeavours, LLC

14:30 - 17:00 Parallel Hands-on Sessions

- Parallel programming I (OpenMP & OmpSs) by David Henty, EPCC
- GPU Programming I (CUDA & OpenACC) by Rob Farber, ICHEC and BlackDog Endeavors, LLC

18:00 - 19:30 Dinner at the Royal Marine Hotel

19:30 - 20:15 Electronic poster session I

20:15 - 21:00 Electronic poster session II

Tuesday, June 26

07:00 - 08:30 Breakfast

08:30 - 09:30 Parallel Sessions

- Material science by Joost VandeVondele, University of Zurich
- Plasma physics by Frank Jenko, Max Planck Institute of Plasma Physics

09:30 - 10:30 Parallel Sessions

- Life science by Erik Lindahl, Stockholm University
- Computational fluid dynamics by James Hetherington, University College London

10:30 - 11:00 Break

11:00 - 12:00 Extreme scaling by Shawn Brown, University of Pittsburgh

12:00 - 13:00 Lunch

13:00 - 16:00 Parallel Hands-on Sessions

- Parallel programming II (OpenMP & OmpSs) by Xavier Teruel, Barcelona Supercomputing Center
- GPU Programming II (CUDA & OpenACC) by Rob Farber, ICHEC and BlackDog Endeavors, LLC

18:00 - 23:00 Jameson Distillery Shindig Evening

Wednesday, June 27

07:00 - 08:30 Breakfast

08:30 - 09:30 Parallel Sessions

- Life science by Thomas Cheatham, University of Utah
- Large-scale agent-based modeling for public health decision making: a guide on how to save lives with supercomputers by Shawn Brown, University of Pittsburgh

09:30 - 10:30 Parallel Sessions

- Astrophysics by Bronson Messer, Oak Ridge National Laboratory
- Nanoscience by Umberto Ravaioli, University of Illinois

10:30 - 11:00 Break

11:00 - 12:00 Parallel Sessions

- HPC software engineering by Erik Lindahl, Stockholm University
- Workflow tools by Scott Callaghan, Southern California Earthquake Center

12:00 - 13:00 Lunch

13:00 - 13:15 Group Photo

13:15 - 13:45 Ministerial Address

Richard Bruton TD, Irish Minister for Jobs, Enterprise and Innovation

13:45 - 17:15 Hands-on Session: Performance analysis and optimization by Philip Blood, Pittsburgh Supercomputing Center, and Christian Roessel, Juelich Supercomputing Centre

18:15 - 19:45 Dinner in Bray

19:45 - 21:45 Bray to Greystones Cliff Walk

Thursday, June 28

07:00 - 08:30 Breakfast

08:30 - 09:30 Data-intensive computing: introduction by Robert Sinkovits, San Diego Supercomputing Center

09:30 - 10:30 Parallel Sessions

- Numerical libraries by Tony Drummond, Lawrence Berkeley National Laboratory
- Parallel filesystems, I/O, data transfer by Lars Koesterke, Texas Advanced Computing Center

10:30 - 11:00 Break

11:00 - 12:00 Parallel Sessions

- Numerical algorithms by Piotr Luszczek, University of Tennessee Knoxville
- Data-intensive case study: climate by Luis Kornbluh, Max Planck Institute for Meteorology

12:00 - 13:30 Lunch

13:30 - 17:00 Hands-on session

Scientific visualization by Amy Szczepanski, University of Tennessee/National Institute for Computation Sciences, and Galen Arnold, National Center for Supercomputing Applications, University of Illinois

18:00 - 20:15 Dinner at city centre restaurant

20:30 - 21:30 Guided city walk in Dublin city centre